shall be treated only as a major automated information system program under chapter 144A of title 10, United States Code.''

CHAPTER 144B—WEAPON SYSTEMS DEVELOPMENT AND RELATED MATTERS

SUBCHAPTER I—MODULAR OPEN SYSTEM APPROACH IN DEVELOPMENT OF WEAPON SYSTEMS

§ 2446a. Requirement for modular open system approach in major defense acquisition programs; definitions

(a) MODULAR OPEN SYSTEM APPROACH REQUIREMENT.—A major defense acquisition program that receives Milestone A or Milestone B approval after January 1, 2019, shall be designed and developed, to the maximum extent practicable, with a modular open system approach to enable incremental development and enhance competition, innovation, and interoperability.

(b) DEFINITIONS.—In this chapter:

(1) The term ''modular open system approach'' means, with respect to a major defense acquisition program, an integrated business and technical strategy that—

(A) employs a modular design that uses major system interfaces between a major system platform and a major system component, between major system components, or between major system platforms;

(B) is subjected to verification to ensure major system interfaces comply with, if available and suitable, widely supported and consensus-based standards;

(C) uses a system architecture that allows severable major system components at the appropriate level to be incrementally added, removed, or replaced throughout the life cycle of a major system platform to afford opportunities for enhanced competition and innovation while yielding—

(i) significant cost savings or avoidance;

(ii) schedule reduction;

(iii) opportunities for technical upgrades;

(iv) increased interoperability, including system of systems interoperability and mission integration; or

(v) other benefits during the sustainment phase of a major weapon system; and

(D) complies with the technical data rights set forth in section 2320 of this title.

(2) The term ''major system platform'' means the highest level structure of a major weapon system that is not physically mounted or installed onto a higher level structure and on which a major system component can be physically mounted or installed.

(3) The term ''major system component''—

(A) means a high level subsystem or assembly, including hardware, software, or an integrated assembly of both, that can be mounted or installed on a major system platform through well-defined major system interfaces; and

(B) includes a subsystem or assembly that is likely to have additional capability requirements, is likely to change because of evolving technology or threat, is needed for interoperability, facilitates incremental deployment of capabilities, or is expected to be replaced by another major system component.

(4) The term ''major system interface''—

(A) means a shared boundary between a major system platform and a major system component, between major system components, or between major system platforms, defined by various physical, logical, and functional characteristics, such as electrical, mechanical, fluidic, optical, radio frequency, data, networking, or software elements; and

(B) is characterized clearly in terms of form, function, and the content that flows across the interface in order to enable technological innovation, incremental improvements, integration, and interoperability.

(5) The term ''program capability document'' means, with respect to a major defense acquisition program, a document that specifies capability requirements for the program, such as a capability development document or a capability production document.

(6) The terms ''program cost targets'' and ''fielding target'' have the meanings provided in section 2448a(a) of this title.

(7) The term ''major defense acquisition program'' has the meaning provided in section 2430 of this title.

(8) The term ''major weapon system'' has the meaning provided in section 2379(f) of this title.

(Added Pub. L. 114–328, div. A, title VIII, § 805(a)(1), Dec. 23, 2016, 130 Stat. 2252.)

EFFECTIVE DATE

Pub. L. 114–328, div. A, title VIII, § 805(a)(4), Dec. 23, 2016, 130 Stat. 2255, provided that: ''Subchapter I of chapter 144B of title 10, United States Code, as added by paragraph (1), shall take effect on January 1, 2017.''

§ 2446b. Requirement to address modular open system approach in program capabilities development and acquisition weapon system design

(a) PROGRAM CAPABILITY DOCUMENT.—A program capability document for a major defense acquisition program shall identify and characterize—

[1] So in original. Does not conform to subchapter heading.

(1) the extent to which requirements for system performance are likely to evolve during the life cycle of the system because of evolving technology, threat, or interoperability needs; and

(2) for requirements that are expected to evolve, the minimum acceptable capability that is necessary for initial operating capability of the major defense acquisition program.

(b) ANALYSIS OF ALTERNATIVES.—The Director of Cost Assessment and Performance Evaluation, in formulating study guidance for analyses of alternatives for major defense acquisition programs and performing such analyses under section 139a(d)(4) of this title, shall ensure that any such analysis for a major defense acquisition program includes consideration of evolutionary acquisition, prototyping, and a modular open system approach.

(c) ACQUISITION STRATEGY.—In the case of a major defense acquisition program that uses a modular open system approach, the acquisition strategy required under section 2431a of this title shall—

(1) clearly describe the modular open system approach to be used for the program;

(2) differentiate between the major system platform and major system components being developed under the program, as well as major system components developed outside the program that will be integrated into the major defense acquisition program;

(3) clearly describe the evolution of major system components that are anticipated to be added, removed, or replaced in subsequent increments;

(4) identify additional major system components that may be added later in the life cycle of the major system platform;

(5) clearly describe how intellectual property and related issues, such as technical data deliverables, that are necessary to support a modular open system approach, will be addressed; and

(6) clearly describe the approach to systems integration and systems-level configuration management to ensure mission and information assurance.

(d) REQUEST FOR PROPOSALS.—The milestone decision authority for a major defense acquisition program that uses a modular open system approach shall ensure that a request for proposals for the development or production phases of the program shall describe the modular open system approach and the minimum set of major system components that must be included in the design of the major defense acquisition program.

(e) MILESTONE B.—A major defense acquisition program may not receive Milestone B approval under section 2366b of this title until the milestone decision authority determines in writing that—

(1) in the case of a program that uses a modular open system approach—

(A) the program incorporates clearly defined major system interfaces between the major system platform and major system components, between major system components, and between major system platforms;

(B) such major system interfaces are consistent with the widely supported and consensus-based standards that exist at the time of the milestone decision, unless such standards are unavailable or unsuitable for particular major system interfaces; and

(C) the Government has arranged to obtain appropriate and necessary intellectual property rights with respect to such major system interfaces upon completion of the development of the major system platform; or

(2) in the case of a program that does not use a modular open system approach, that the use of a modular open system approach is not practicable.

(Added Pub. L. 114–328, div. A, title VIII, § 805(a)(1), Dec. 23, 2016, 130 Stat. 2253.)

EFFECTIVE DATE

Section effective Jan. 1, 2017, see section 805(a)(4) of Pub. L. 114–328, set out as a note under section 2446a of this title.

§ 2446c. Requirements relating to availability of major system interfaces and support for modular open system approach

The Secretary of each military department shall—

(1) coordinate with the other military departments, the defense agencies, defense and other private sector entities, national standards-setting organizations, and, when appropriate, with elements of the intelligence community with respect to the specification, identification, development, and maintenance of major system interfaces and standards for use in major system platforms, where practicable;

(2) ensure that major system interfaces incorporate commercial standards and other widely supported consensus-based standards that are validated, published, and maintained by recognized standards organizations to the maximum extent practicable;

(3) ensure that sufficient systems engineering and development expertise and resources are available to support the use of a modular open system approach in requirements development and acquisition program planning;

(4) ensure that necessary planning, programming, and budgeting resources are provided to specify, identify, develop, and sustain the modular open system approach, associated major system interfaces, systems integration, and any additional program activities necessary to sustain innovation and interoperability; and

(5) ensure that adequate training in the use of a modular open system approach is provided to members of the requirements and acquisition workforce.

(Added Pub. L. 114–328, div. A, title VIII, § 805(a)(1), Dec. 23, 2016, 130 Stat. 2255.)

EFFECTIVE DATE

Section effective Jan. 1, 2017, see section 805(a)(4) of Pub. L. 114–328, set out as a note under section 2446a of this title.

SUBCHAPTER II—DEVELOPMENT, PROTOTYPING, AND DEPLOYMENT OF WEAPON SYSTEM COMPONENTS OR TECHNOLOGY

Sec.

§ 2447a. Weapon system component or technology prototype projects: display of budget information

(a) REQUIREMENTS FOR BUDGET DISPLAY.—In the defense budget materials for any fiscal year after fiscal year 2017, the Secretary of Defense shall, with respect to advanced component development and prototype activities (within the research, development, test, and evaluation budget), set forth the amounts requested for each of the following:

(1) Acquisition programs of record.

(2) Development, prototyping, and experimentation of weapon system components or other technologies, including those based on commercial items and technologies, separate from acquisition programs of record.

(3) Other budget line items as determined by the Secretary of Defense.

(b) ADDITIONAL REQUIREMENTS.—For purposes of subsection (a)(2), the amounts requested for development, prototyping, and experimentation of weapon system components or other technologies shall be—

(1) structured into either capability, weapon system component, or technology portfolios that reflect the priority areas for prototype projects; and

(2) justified with general descriptions of the types of capability areas and technologies being funded or expected to be funded during the fiscal year concerned.

(c) DEFINITIONS.—In this section, the terms ''budget'' and ''defense budget materials'' have the meaning given those terms in section 234 of this title.

(Added Pub. L. 114–328, div. A, title VIII, § 806(a)(1), Dec. 23, 2016, 130 Stat. 2256.)

EFFECTIVE DATE

Pub. L. 114–328, div. A, title VIII, § 806(a)(2), Dec. 23, 2016, 130 Stat. 2259, provided that: ''Subchapter II of chapter 144B of title 10, United States Code, as added by paragraph (1), shall take effect on January 1, 2017.''

§ 2447b. Weapon system component or technology prototype projects: oversight

(a) ESTABLISHMENT.—The Secretary of each military department shall establish an oversight board or identify a similar existing group of senior advisors for managing prototype projects for weapon system components and other technologies and subsystems, including the use of funds for such projects, within the military department concerned.

(b) MEMBERSHIP.—Each oversight board shall be comprised of senior officials with—

(1) expertise in requirements; research, development, test, and evaluation; acquisition; sustainment; or other relevant areas within the military department concerned;

(2) awareness of technology development activities and opportunities in the Department of Defense, industry, and other sources; and

(3) awareness of the component capability requirements of major weapon systems, including scheduling and fielding goals for such component capabilities.

(c) FUNCTIONS.—The functions of each oversight board are as follows:

(1) To issue a strategic plan every three years that prioritizes the capability and weapon system component portfolio areas for conducting prototype projects, based on assessments of—

(A) high priority warfighter needs;

(B) capability gaps or readiness issues with major weapon systems;

(C) opportunities to incrementally integrate new components into major weapon systems based on commercial technology or science and technology efforts that are expected to be sufficiently mature to prototype within three years; and

(D) opportunities to reduce operation and support costs of major weapon systems.

(2) To annually recommend funding levels for weapon system component or technology development and prototype projects across capability or weapon system component portfolios.

(3) To annually recommend to the service acquisition executive of the military department concerned specific weapon system component or technology development and prototype projects, subject to the requirements and limitations in section 2447c of this title.

(4) To ensure projects are managed by experts within the Department of Defense who are knowledgeable in research, development, test, and evaluation and who are aware of opportunities for incremental deployment of component capabilities and other technologies to major weapon systems or directly to support warfighting capabilities.

(5) To ensure projects are conducted in a manner that allows for appropriate experimentation and technology risk.

(6) To ensure projects have a plan for technology transition of the prototype into a fielded system, program of record, or operational use, as appropriate, upon successful achievement of technical and project goals.

(7) To ensure necessary technical, contracting, and financial management resources are available to support each project.

(8) To submit to the congressional defense committees a semiannual notification that includes the following:

(A) each weapon system component or technology prototype project initiated during the preceding six months, including an explanation of each project and its required funding.